

CLAIMS

1. An optical transmission apparatus comprising a laser element and an optical fiber and having an optimum position
5 where the efficiency of optical coupling between said laser element and said optical fiber becomes a maximum, wherein

said laser element and said optical fiber are fixed at positions shifted from said optimum position in the
10 direction of the optical axis by a value within a range from 10 μ m to 150 μ m.

2. The optical transmission apparatus according to claim 1, wherein outgoing light of said laser element
15 is not parallel to the optical axis of the outgoing light from an end face of said optical fiber and the outgoing light of said laser element is not parallel to the optical axis of light reflected on the end face of said optical fiber.

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3. The optical transmission apparatus according to claim 1, wherein said laser element is a multi-mode oscillation laser element, said optical fiber is a 1.3 μ m zero-dispersion type optical fiber and the efficiency
25 of optical coupling between said multi-mode oscillation laser element and said optical fiber is equal to or less than 10%.

4. The optical transmission apparatus according to claim 1, wherein said laser element is a multi-mode oscillation laser element, said optical fiber is a 1.3 μ m
5 zero-dispersion type fiber, a multi-branching optical coupler is connected subsequent to said multi-mode oscillation laser element, and the product of the efficiency of optical coupling between said multi-mode oscillation laser element and said optical fiber and the
10 square of the reciprocal of the number of branches of said multi-branching optical coupler is equal to or less than 10%.